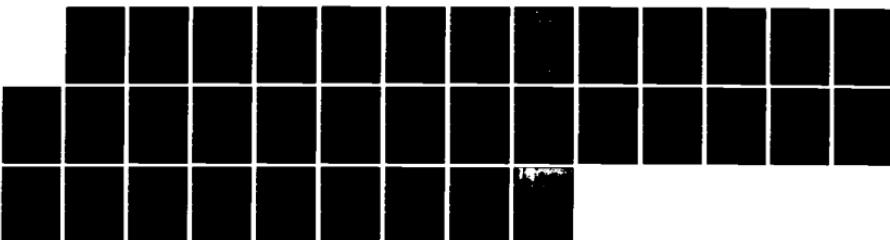
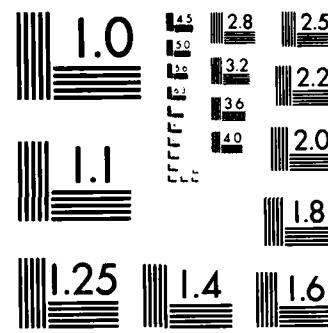


PD-A131 920 19310 MLR MISSILE NUMBERS BN-324 BN-327 BN-325 BN-328 1/1
BN-326 BN-329 ROU. (U) ARMY ELECTRONICS RESEARCH AND
DEVELOPMENT COMMAND WSMR NM ATM. D C KELLER JUL 83
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METEOROLOGICAL DATA REPORT

19310A MLRS
Missile Number BN-324, BN-327,
BN-325, BN-328, BN-326, BN-329
Round Number 491/DL-31 thru 496/DL-36
29 July 83

by

DONALD C. KELLER
Program Support Coordinator
Phone Number (505) 679-9568
AVN Number 349-9568

ATMOSPHERIC SCIENCES LABORATORY
WHITE SANDS MISSILE RANGE, NEW MEXICO

.....
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UNITED STATES ARMY ELECTRONICS COMMAND

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Meteorological data gathered for the launching of the 19310A MLRS, Missile Number BN-324, BN-327, BN-325, BN-328, BN-326, BN-329, Round Number 491/DL-31 thru 496/DL-36 are presented in tabular form.		

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LAUNCH AREA DIAGRAM -----	3
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INTRODUCTION

19310A MLRS, Missile Numbers BN-324, BN-327, BN-325, BN-328, BN-326 and BN-329 Round Numbers 491/DL-31 thru 496/DL-36, were launched from Brillo, White Sands Missile Range (WSMR), New Mexico, at 1047:25, 1047:29, 1047:34, 1047:38, 1047:43 and 1047:47 MDT, 29 JUL 83. The scheduled launch times were 1045 MDT with a 4.5 second separation.

DISCUSSION

Meteorological data were recorded and reduced by the White Sands Meteorological Team, Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The data were obtained by the following methods:

1. Observations

a. Surface

(1) Standard surface observations to include pressure, temperature ($^{\circ}\text{C}$), relative humidity, dew point ($^{\circ}\text{C}$), density (gm/m^3), wind direction and speed, and cloud cover were made at the Brillo Met Site at T-0 minutes.

(2) Anemometer data were provided from existing tower-mounted anemometers at Brillo. Monitor of wind speed and direction from one anemometer was also provided in the launch control room.

b. Upper Air

(1) Low level wind data were obtained from pilot-balloon observations at:

SITE AND ALTITUDE

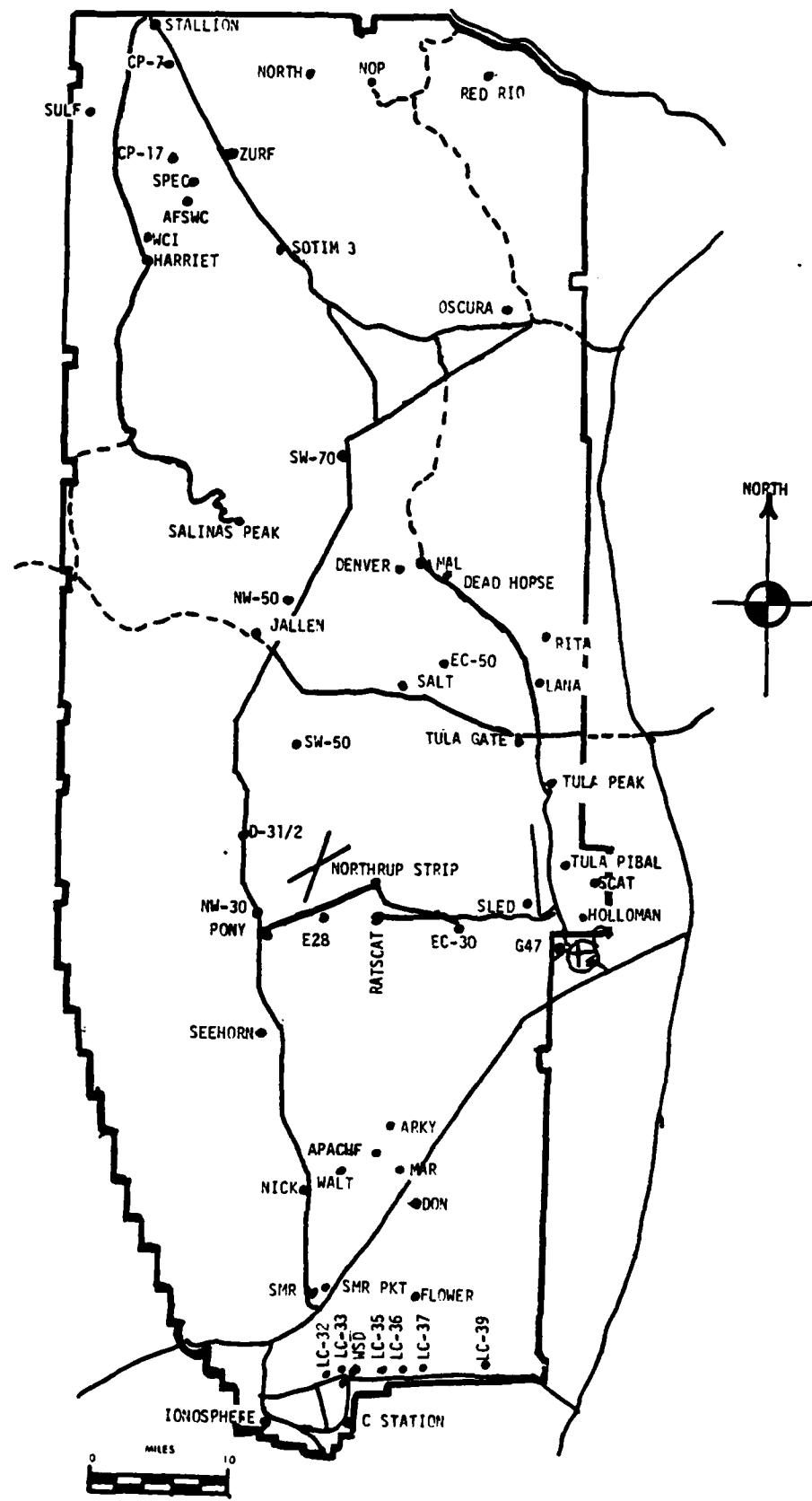
D 3 $\frac{1}{2}$	2 Km
MAL	2 Km

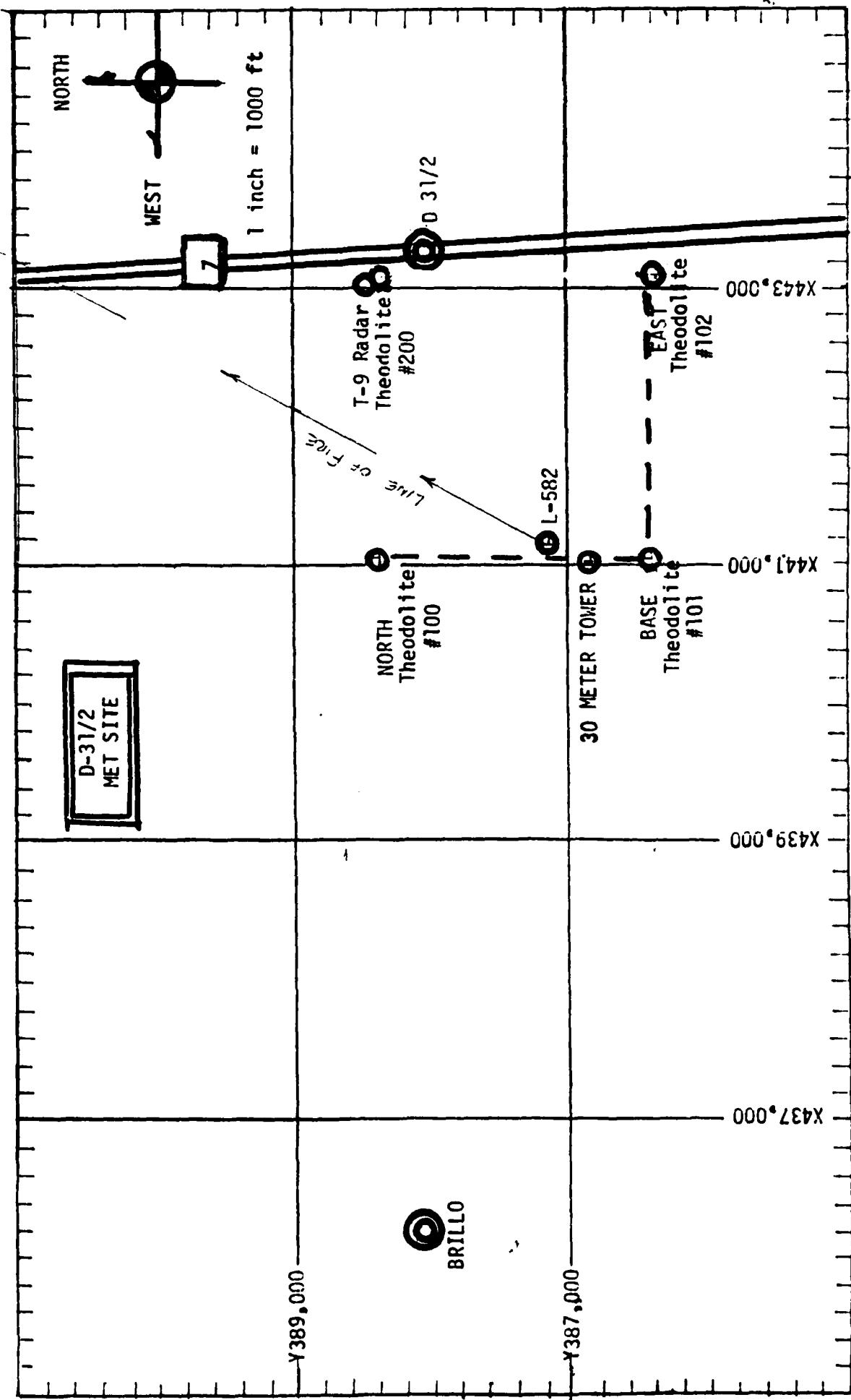
(2) Air structure data (rawinsonde) were collected at the following Met Sites.

SITE AND TIME

JALLEN	0800 MDT
E-28	0915 MDT
JALLEN	1045 MDT

WSMR METEOROLOGICAL SITES





FOOT C. SURFACE OBSERVATION

TABLE 1

DATE MM DD	PRESSURE inHg	DEW POINT OF C	DEW POINT OF C	RELATIVE HUMIDITY %	RELATIVE HUMIDITY %	WIND DIR deg N	WIND SPEED kts	CHARACTER	VISIBIL- ITY
29 JUL 83	30.0	32.8	32	13.2	32	340	02		20

OBSTRUCTIONS TO VISIBILITY	CLOUDS			REMARKS		
	1st LAYER	2nd LAYER	3rd LAYER	AMT	TYPE	HGT
1 SC	6000	3 AC	12500	1 CI	25500	H ALQDS

PSYCHROMETRIC COMPUTATION

TIME: MDT	1047
DRY BULB TEMP.	32.8
WET BULB TEMP.	19.9
WET BULB DEPR.	12.9
DEW POINT	13.9
RELATIVE HUMID.	32

TABLE 2

Anemometer Data - 30 FT. Level of 30 Meter Tower

X= 441,018.71 Y= 386,349.19 H= 4,004.80 (BASE)

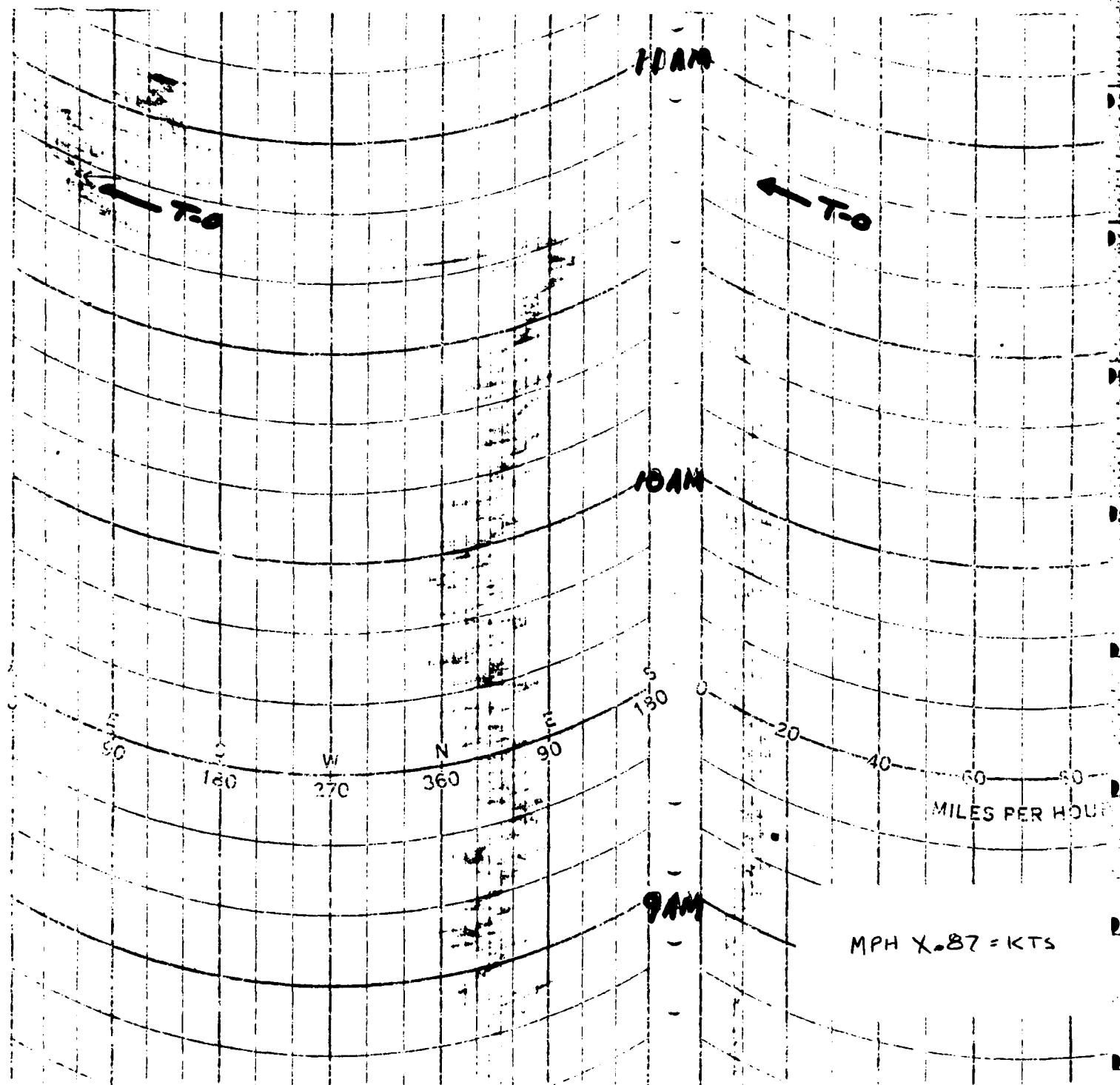


TABLE 3

Anemometer Data at 60 ft. level of 30 Meter Tower

X = 441,018.71 Y = 396,349.19 H = 4,004.80 (BASE)

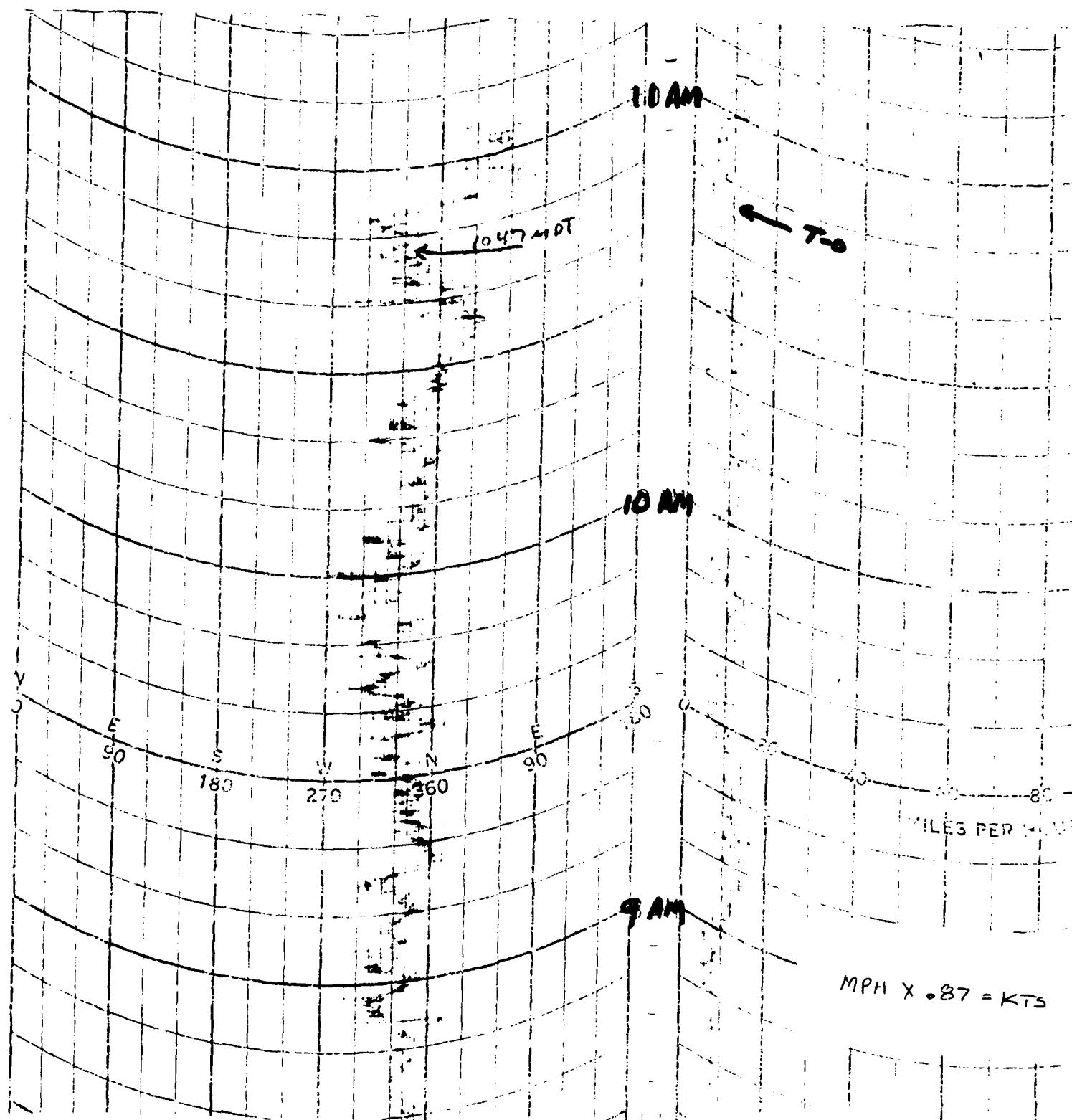


TABLE 4

Anemometer Data - 90 FT Level of 30 Meter Tower

X= 441,018.71 Y= 336,849.19 H= 4,004.80 (BASE)

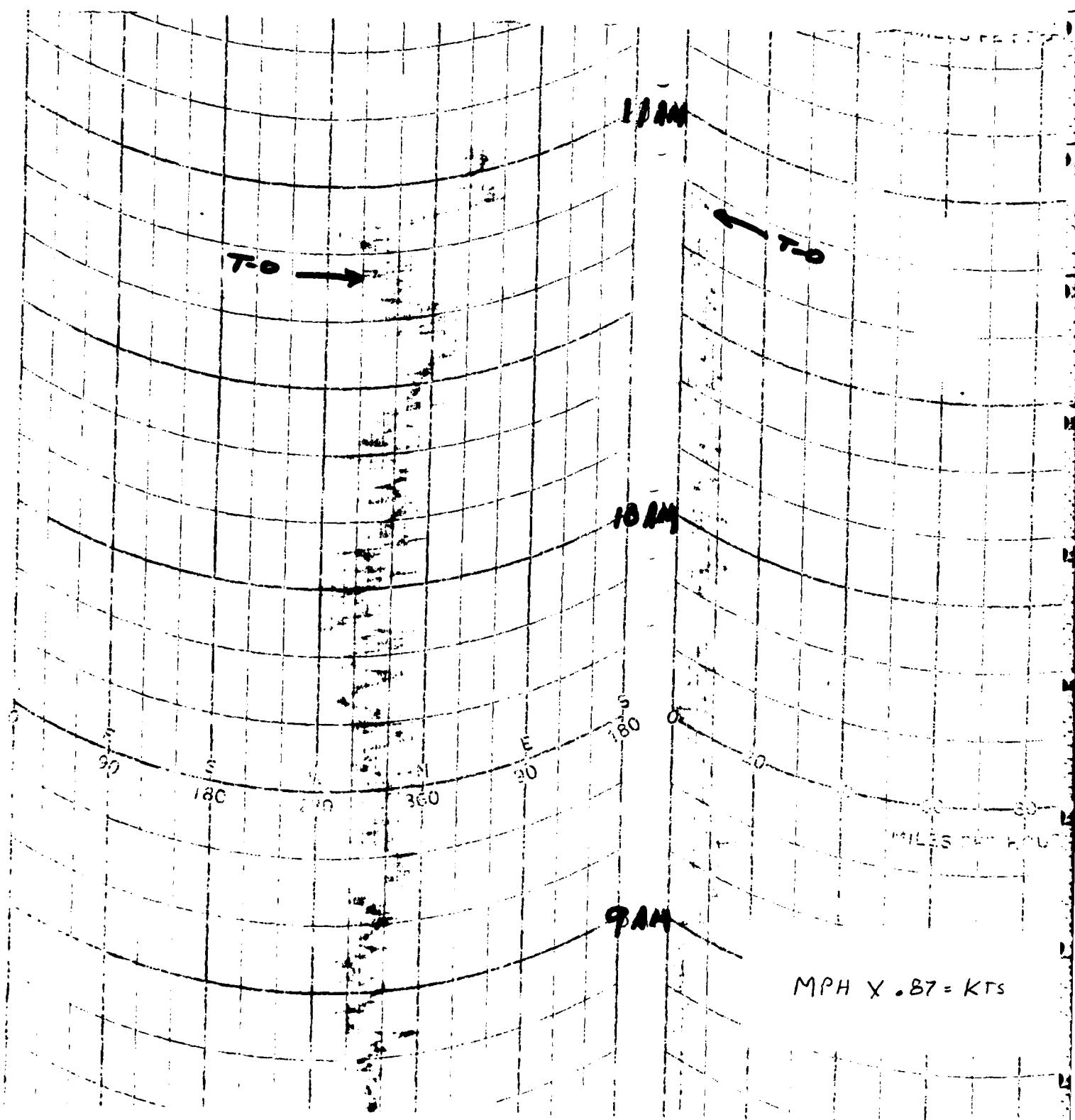


TABLE 5

T-TIME PILOT-BALLOON MEASURED WIND DATA

DATE 29 JULY 83

SITE: D $3\frac{1}{2}$
 TIME: 1047 MDT
 WSTM COORDINATES:
 X= 443,093.12
 Y= 386,316.94
 H= 3,962.25

SITE: MAL
 TIME 1045 MDT
 WSTM COORDINATES:
 X= 509,421.05
 Y= 495,563.18
 H= 4,126.81

LAYER	MIDPOINT	DIRECTION	SPEED	LAYER	MIDPOINT	DIRECTION	SPEED
METERS AGL		DEGREES	KNOTS	METERS AGL		DEGREES	KNOTS
	SURFACE	340	02		SURFACE	350	03
150	020	07		150	041	05	
210	027	07		210	049	05	
270	040	06		270	056	05	
330	057	05		330	062	05	
390	054	04		390	068	05	
500	024	03		500	071	05	
650	024	03		650	056	05	
800	031	04		800	039	06	
950	028	05		950	023	06	
1150	053	04		1150	121	02	
1350	086	04		1350	093	09	
1550	109	04		1550	086	10	
1750	126	05		1750	092	14	
2000	118	09		2000	090	16	

Data obtained from a Single Theodolite tracked Pilot-Balloon observation.

Data obtained from a Double Theodolite tracked Pilot-Balloon observation.

TABLE 6

ALMING AND T-TIME COMPUTER MET MESSAGES

29 July 1983

JALLEN 0800 MDT	E-28 0915 MDT	JALLEN 1045 MDT
METCM1332065	METCM1329065	METCM1332065
291400124880	291530119885	291680124880
00018002 29940880	00604003 30140885	00071007 30700880
01006004 29950870	01606008 30130875	01010009 30410870
02048012 29920845	02080002 29940851	02078014 30100846
03084007 29700807	03118003 29730812	03108009 29780809
04173005 29440762	04219004 29440767	04202008 29410763
05196012 29030719	05203007 29070724	05193011 29060720
06197011 28600678	06171011 28670682	06180017 28650679
07192014 28150638	07176014 28250642	07199017 28200639
08200017 27700600	08186016 27780605	08211017 27770601
09213014 27260564	09202015 27330568	09201015 27370565
10144005 26910530	10180012 26980534	10157014 27000531
11201004 26610497	11143009 26690501	11136013 26640498
12210006 26090451	12183008 26190455	12179006 26200452
13231010 25490395	13265015 24670399	13282012 25660397
14244013 24820345	14234014 25000349	14236014 27970347
15232011 24070300	15214014 24220304	15218018 24180302
16256012 23270260	16214013 23390263	16218018 23340262
17322016 22470224	17242014 22560227	17252021 22610226
18298013 21670192	18265016 21920195	18270018 21850194
19271010 21140164	19306013 21280166	19304016 21190165
20348017 20590139	20347015 20670142	20367015 20650141
21330018 20220118	21308019 20340120	21297022 20310119
22193015 20080100	22269011 20250101	22244011 20270101
23197015 20550084	23170021 20470086	23199022 20660085
24181017 21290072	24234016 21160073	24194013 21130073
25185018 21430061	25169016 21310062	25165021 21280062
26177018 21510052	26161022 21400053	26174027 21470053

SATION ALTITUDE 4,411.00
29 JULY 03
ASCENSIOH NO. 0800 MDT

SIGNIFICANT LEVEL DATA
2100030103
JALLET

GEOPHIC COORDINATES
33°16'712 LAT DEG
106°49'511 LONG DEG

TABLE 7

PRESSURE GEOMETRIC MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEPOINT DEGREES CENTIGRADE	KELVIN PERCENT
879.5	4051.0	24.5	42.0
875.5	4182.2	24.8	30.0
856.7	4807.7	25.5	32.0
856.0	5034.1	25.0	30.0
801.2	6728.8	21.9	40.0
774.9	7679.7	21.2	39.0
716.1	9903.4	15.7	40.0
700.0	10536.2	14.2	42.0
614.9	14074.1	4.7	59.0
576.1	15808.3	*.1	-4.9
553.7	16849.2	-2.9	-5.7
500.0	19489.8	-7.4	-7.9
463.8	21405.2	-10.9	-13.2
440.6	22695.3	-14.4	-14.6
423.0	23710.0	-16.1	-16.5
414.8	24195.3	-16.4	-16.8
400.0	25093.0	-17.7	-24.3
379.2	26401.6	-20.4	-29.9
337.5	29208.5	-26.2	-37.3
300.0	31979.2	-32.3	-41.5
286.5	33041.5	-35.6	-45.2
267.5	34603.0	-36.9	-46.9
250.0	36120.0	-42.6	
230.4	37919.1	-46.9	
200.0	40954.0	-54.9	
189.7	42061.0	-57.6	
170.9	44220.6	-60.0	
150.0	46071.4	-65.4	
125.1	50073.6	-70.0	
111.4	52737.9	-72.2	
104.4	54000.0	-71.6	
100.0	54034.8	-73.5	
93.6	56111.0	-73.5	
93.3	56173.6	-69.6	
79.2	59676.9	-66.2	
73.2	61021.5	-59.2	
70.0	61947.0	-58.9	
57.6	65387.0	-58.9	
50.0	68924.5	-57.7	
42.4	72398.2	-53.9	

STATION ALTITUDE 4051.00 FEET MSL
29 JULY 83 0800 MDT
ASCENSION NO. 103

SIGNIFICANT LEVEL DATA

2100030102
JALLEN

GEODDITIC COORDINATES
33.16712 LAT DEG
106.49511 LON DEG

TABLE 7 CON'T

PRESSURE GEOMETRIC MILLIBARS	ALTITUDE MSL FEET	TEMPERATURE AIR DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT.
35.9	75042.2	-52.5	

STATION ALTITUDE 4051.00 FEET MSL
29 JULY 85 0800 PDT MSL
ASCENSION NO. 103

UPPER AIR DATA
2100330103
JALLEN
TABLE 8

GEOPOTENTIAL
ALTITUDE
MSL FEET
MILLIBARS
MILLIBARS
TEMPERATURE
AIR
DEWPOINT
PERCENT
CENTIGRADE
CENTIGRADE

GEOPOTENTIAL ALTITUDE MSL FEET MILLIBARS MILLIBARS	TEMPERATURE AIR DEWPOINT PERCENT CENTIGRADE CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPD OF SOUND KNOTS	DIRECTION DEGREES	WIND DATA KNOTS	INFLUX OF REFRACTION
4051.0	379.5	24.5	10.0	42.0	1023.6	674.0	10.0
4500.0	865.9	25.2	6.9	31.0	1006.8	674.3	26.0
5000.0	851.9	25.1	6.4	30.3	989.8	674.2	30.9
5500.0	835.3	24.1	6.8	32.7	975.6	673.2	35.0
6000.0	821.8	23.2	7.2	35.7	961.4	672.3	36.4
6500.0	807.6	22.3	7.0	38.7	947.6	671.3	40.8
7000.0	795.6	21.7	7.4	39.7	933.0	670.6	60.4
7500.0	779.8	21.3	6.9	39.2	918.0	670.2	76.2
8000.0	765.1	20.4	6.1	39.1	905.0	669.0	94.4
8500.0	752.7	19.2	5.0	39.4	893.0	667.5	110.3
9000.0	739.4	17.9	4.0	39.6	881.3	666.1	115.7
9500.0	726.4	16.7	3.0	39.6	869.6	664.6	112.7
10000.0	713.6	15.5	2.1	40.3	858.1	663.1	109.4
10500.0	700.9	14.3	1.5	41.9	846.4	661.7	106.3
11000.0	688.2	13.0	1.1	44.2	834.9	660.2	107.5
11500.0	675.7	11.6	0.6	46.6	823.7	658.6	108.7
12000.0	663.4	10.3	0.1	49.0	812.6	657.0	109.2
12500.0	651.4	8.9	-5.5	51.4	801.7	655.4	109.3
13000.0	639.6	7.6	-1.2	53.8	791.0	653.8	109.2
13500.0	628.0	6.2	-1.8	56.2	780.5	652.2	109.4
14000.0	616.6	4.9	-2.5	58.6	770.1	650.6	109.8
14500.0	605.1	3.6	-3.1	61.5	759.5	649.0	112.4
15000.0	593.9	2.2	-3.8	64.3	749.0	647.5	115.8
15500.0	582.6	0.9	-4.5	67.2	738.7	645.9	117.9
16000.0	571.9	-0.5	-4.6	73.6	728.5	644.3	120.0
16500.0	561.1	-1.9	-4.0	85.6	718.4	642.6	116.8
17000.0	550.5	-3.2	-4.0	94.1	708.1	641.1	111.7
17500.0	540.0	-4.0	-4.0	94.5	696.8	640.1	103.4
18000.0	529.6	-4.9	-5.0	94.9	685.7	639.0	84.5
18500.0	519.5	-5.7	-6.3	95.3	674.6	638.0	75.7
19000.0	509.6	-6.6	-7.1	95.6	664.1	636.9	65.1
19500.0	499.8	-7.4	-8.0	95.9	653.6	635.9	106.3
20000.0	490.1	-8.3	-9.3	92.5	643.2	634.7	116.0
20500.0	480.6	-9.2	-10.7	89.1	633.0	633.5	116.7
21000.0	471.2	-10.2	-12.1	85.8	623.0	632.4	117.6
21500.0	462.1	-11.2	-13.3	84.0	613.0	631.1	119.1
22000.0	453.0	-12.5	-13.9	89.5	604.4	629.5	119.3
22500.0	444.0	-13.9	-14.5	94.9	595.6	627.8	117.2
23000.0	435.2	-14.9	-15.2	97.3	586.2	626.0	116.1
23500.0	426.6	-15.7	-16.0	97.8	576.4	625.5	116.1

STATION ALTITUDE 4,510.00 FEET MSL
29 JULY 83 0800 MDT
ASCENSION NO. 103

UPPER AIR DATA
2100030103
JALIFN
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TABLE 8 CON'T

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	DEWPOINT PERCENT	REL. HUM. METER	SPD OF WIND KNOTS	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
24000.0	410.1	-16.3	-16.0	97.4	560.1	624.9	1.000136
24500.0	409.7	-16.0	-19.0	83.1	556.2	624.1	1.000132
25000.0	401.5	-17.6	-23.4	60.2	546.0	623.1	1.000127
25500.0	395.4	-18.5	-26.0	51.6	537.9	621.0	1.000124
26000.0	385.5	-19.6	-28.1	46.3	529.2	620.6	1.000121
26500.0	377.7	-20.6	-30.2	41.7	520.7	619.3	1.000119
27000.0	369.9	-21.6	-31.5	40.3	512.1	610.0	1.000117
27500.0	362.3	-22.7	-32.8	38.9	503.7	616.7	1.000115
28000.0	354.9	-23.7	-34.1	37.4	495.4	615.4	1.000112
28500.0	347.6	-24.7	-35.4	36.0	487.3	614.1	1.000110
29000.0	340.4	-25.8	-36.8	34.6	479.3	612.8	1.000108
29500.0	333.3	-26.8	-37.7	31.5	471.3	611.5	1.000106
30000.0	326.3	-27.9	-38.5	35.4	463.5	610.1	1.000105
31500.0	319.5	-29.0	-39.2	36.3	455.8	608.7	1.000103
31000.0	312.8	-30.1	-40.0	37.2	448.3	607.4	1.000101
31500.0	306.2	-31.2	-40.0	38.1	440.6	606.0	1.000099
32000.0	299.7	-32.4	-41.6	39.1	433.6	604.6	1.000098
32500.0	293.3	-33.9	-42.3	41.9	427.0	602.6	1.000096
33000.0	287.0	-35.5	-43.2	44.8	420.6	600.7	1.000095
33500.0	280.8	-36.6	-44.3	44.1	413.4	599.3	1.000093
34000.0	274.7	-37.6	-45.5	43.2	406.2	597.9	1.000091
34500.0	268.7	-38.7	-46.7	42.2	399.2	596.6	1.000090
35000.0	262.8	-39.9	-50.4	31.0**	392.4	595.0	1.000089
35500.0	257.0	-41.1	-56.4	17.2**	385.8	593.5	1.000086
36000.0	251.3	-42.3	-69.5	3.3**	379.3	591.9	1.000085
36500.0	245.7	-43.5			372.8	590.4	1.000083
37000.0	240.2	-44.7			366.3	588.8	1.000082
37500.0	234.8	-45.9			360.0	587.3	1.000081
38000.0	229.5	-47.1			353.8	585.7	1.000079
38500.0	224.2	-48.4			347.6	584.0	1.000077
39000.0	219.1	-49.7			341.6	582.3	1.000076
39500.0	214.0	-51.1			335.7	580.6	1.000075
40000.0	209.1	-52.4			330.0	578.8	1.000073
40500.0	204.3	-53.7			324.3	577.1	1.000072
41000.0	199.6	-55.0			318.7	575.4	1.000071
41500.0	194.9	-56.2			312.9	573.8	1.000070
42000.0	190.3	-57.5			307.3	572.2	1.000068
42500.0	185.7	-58.1			300.8	571.3	1.000067
43000.0	181.3	-58.6			294.4	570.6	1.000066
43500.0	177.0	-59.2			288.1	569.8	1.000064

** AT LAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4051.00 FEET MSL
29 JULY 03 0800 MDT
ASCENSION NO. 113

UPPER AIR DATA
2100030103
JALLEN

TABLE 8 CON'T

GEOMETRIC PRESSURE ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	KEL. HUM. PERCENT	SHED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(LTN)	INDEX OF REFRACTION
44000.0	172.7	-59.8	282.0	569.1	1.000063
44500.0	169.6	-60.6	276.2	568.0	1.000062
45000.0	164.5	-61.6	270.8	566.7	1.000060
45500.0	160.5	-62.6	265.5	565.3	1.000059
46000.0	156.6	-63.6	260.3	563.9	1.000058
46500.0	152.8	-64.6	255.2	562.5	1.000057
47000.0	149.0	-65.6	250.1	561.3	1.000056
47500.0	145.5	-66.2	244.6	560.4	1.000054
48000.0	141.7	-66.8	239.3	559.6	1.000053
48500.0	136.2	-67.5	234.1	558.7	1.000052
49000.0	134.7	-68.1	228.9	557.8	1.000051
49500.0	131.4	-68.8	223.9	557.0	1.000050
50000.0	128.1	-69.4	219.1	556.1	1.000049
50500.0	124.9	-70.0	214.3	555.2	1.000048
51000.0	121.8	-70.5	209.3	554.6	1.000047
51500.0	118.7	-71.0	204.5	553.9	1.000046
52000.0	115.7	-71.5	199.8	553.2	1.000045
52500.0	112.8	-72.0	195.3	552.6	1.000043
53000.0	109.9	-72.1	190.4	552.4	1.000042
53500.0	107.1	-71.8	185.4	552.8	1.000041
54000.0	104.4	-71.6	180.4	553.1	1.000040
54500.0	101.7	-72.7	176.9	551.5	1.000039
55000.0	98.1	-73.5	173.0	550.5	1.000039
55500.0	95.6	-73.5	168.6	550.5	1.000038
56000.0	94.1	-73.5	164.3	550.5	1.000037
56500.0	91.0	-69.3	156.8	556.2	1.000035
57000.0	89.5	-68.8	152.6	556.9	1.000034
57500.0	87.3	-68.3	148.4	557.6	1.000033
58000.0	85.1	-67.8	144.4	558.2	1.000032
58500.0	83.0	-67.3	140.5	558.9	1.000031
59000.0	80.9	-66.9	136.6	559.5	1.000030
59500.0	78.9	-66.4	132.9	560.2	1.000029
60000.0	77.0	-64.5	128.5	562.7	1.000028
60500.0	75.1	-61.9	123.9	566.2	1.000027
61000.0	73.3	-59.3	119.4	569.7	1.000026
61500.0	71.5	-59.0	116.4	570.0	1.000025
62000.0	69.8	-58.9	113.5	570.2	1.000025
62500.0	68.2	-58.9	110.8	570.2	1.000024
63000.0	66.5	-58.9	108.2	570.2	1.000024
63500.0	64.9	-58.9	105.6	570.2	1.000024

XX WIND DATA IN ALIJD DUE TO MISSING RAW AZIMUTH AND ELEVATION ANGLES.

STATION ALTITUDE 41.00 FET MSL
29 JULY 03 0800 MDT
ASCENSION NO. 103

UPPER AIR DATA
2100050103
JALLEN

GEOMETRIC PRESSURE
ALTITUDE
MSL FEET
MILLIBARS
DEGREES CENIGRADE

TEMPERATURE UPF
AIR DEWPOINT
PERCENT
REL. HUM.
GM/CURIC
METER

64000.0	64.4	-58.9	103.1	570.2	1.000023
64500.0	61.9	-58.9	100.6	570.2	1.000022
65000.0	60.4	-58.9	98.2	570.2	1.000022
65500.0	59.1	-58.9	95.9	570.2	1.000021
66000.0	57.6	-58.9	93.6	570.2	1.000021
66500.0	56.2	-58.7	91.3	570.5	1.000020
67000.0	54.9	-58.5	89.0	570.8	1.000020
67500.0	53.6	-58.3	86.8	571.1	1.000019
68000.0	52.3	-58.1	84.7	571.3	1.000019
68500.0	51.0	-57.9	82.6	571.6	1.000018
69000.0	49.8	-57.6	80.5	571.9	1.000018
69500.0	48.7	-57.1	78.5	572.7	1.000017
70000.0	47.5	-56.5	76.4	573.4	1.000017
70500.0	46.4	-56.0	74.4	574.1	1.000017
71000.0	45.3	-55.4	72.5	574.8	1.000016
71500.0	44.2	-54.9	70.6	575.6	1.000016
72000.0	43.2	-54.3	68.8	576.3	1.000015
72500.0	42.2	-53.9	67.0	576.9	1.000015
73000.0	41.2	-53.7	65.4	577.2	1.000015
73500.0	40.3	-53.5	63.8	577.4	1.000014
74000.0	39.3	-53.3	62.5	577.7	1.000014
74500.0	38.4	-53.1	60.8	577.9	1.000014
75000.0	37.5	-52.9	59.3	578.2	1.000013
75500.0	36.7	-52.7	57.9	578.5	1.000013

TABLE 8 CON'T

GEOMETRIC COORDINATES 33.16712 LAT DEG 106.49511 LON DEG	INDEX OF REFRACTION
1.000023	1.000022
1.000022	1.000022
1.000021	1.000021
1.000021	1.000021
1.000020	1.000020
1.000020	1.000020
1.000019	1.000019
1.000019	1.000019
1.000018	1.000018
1.000017	1.000017
1.000017	1.000017
1.000016	1.000016
1.000016	1.000016
1.000015	1.000015
1.000015	1.000015
1.000015	1.000015
1.000014	1.000014
1.000014	1.000014
1.000013	1.000013

XX WIND DATA INVALID DUE TO MISSING RAW AZIMUTH AND ELEVATION ANGLES.

STATION ALTITUDE 4051.00 FT MSL
29 JULY 83 0800 MDT
ASCENSION NO. 10, 0800 MDT

MANDATORY LEVELS
2100030103
JALLEN
TABLE 9

GEODETIC COORDINATES
33.16712 LAT DEG
106.49511 LON DEG

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE DEGREES CENTIGRADE	AIR DEPOINT PERCENT	WIND DATA	
				DIRECTION DEGREES (TN)	SPEED KNOTS
850.0	5031.	25.0	6.2	30.1	7.1
800.0	6766.	21.9	7.7	40.	54.0
750.0	8578.	18.9	4.8	39.	113.1
700.0	10526.	14.2	1.5	42.	106.3
650.0	12561.	8.8	-6	52.	109.3
600.0	14713.	3.0	-3.4	63.	113.9
550.0	17003.	-3.2	-4.0	94.	111.5
500.0	19463.	-7.4	-7.9	96.	105.6
450.0	22134.	-13.0	-14.1	91.	110.7
400.0	25052.	-17.7	-24.3	56.	129.0
350.0	28209.	-24.4	-35.0	36.	144.1
300.0	31916.	-32.3	-41.5	39.	125.4
250.0	36042.	-42.6			154.5
200.0	40856.	-54.9			174.0
175.0	43622.	-59.5			149.5
150.0	46746.	-65.4			202.4
125.0	50346.	-70.0			182.5
100.0	54667.	-73.5			9999.0XX
80.0	59029.	-66.6			9999.0XX
70.0	61737.	-58.9			9999.0XX
60.0	64911.	-58.9			9999.0XX
50.0	68673.	-57.7			9999.0XX
40.0	73345.	-53.4			87.8 27.3

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

XX WIND DATA INVALID DUE TO MISSING RAW AZIMUTH AND ELEVATION ANGLES.

STATION ALTITUDE 3912.76 FEET MSL
29 JULY 83
ASCENSION NO. 4. 0915 MDT

SIGNIFICANT LEVEL DATA

2100290042
EAST-2 WEST
CHART

TABLE 10

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE DEGREES CENTIGRADE	AIR DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT
885.0	3912.7	26.8	9.6	34.0
881.0	4044.2	27.4	6.6	27.0
856.0	5079.7	24.5	10.0	40.0
812.4	6177.8	22.5	9.0	42.0
802.8	6717.4	22.0	6.5	42.0
765.2	8081.3	19.8	6.5	42.0
706.0	10578.8	14.2	2.5	45.0
643.2	12904.6	8.5	-8	52.0
569.4	16165.8	-8	-2.5	88.0
517.2	18672.0	-5.7	-6.9	91.0
500.0	19544.1	-7.0	-7.5	96.0
472.3	21001.4	-9.7	-10.1	97.0
432.6	23214.4	-14.4	-16.1	87.0
413.3	24352.2	-15.0	-29.0	29.0
400.0	25164.5	-16.2	-27.2	38.0
384.2	26159.5	-18.1	-27.6	43.0
361.1	27675.3	-21.2	-35.9	25.0
327.8	30000.4	-26.7	-36.3	32.0
300.0	32086.0	-31.6	-40.0	43.0
264.4	34984.5	-39.0	-47.4	40.0
256.0	36240.4	-42.4		
216.9	39952.6	-51.5		
209.7	40177.1	-51.2		
201.0	41084.8	-53.4		
184.9	42741.7	-55.6		
156.1	46230.1	-63.2		
150.0	47641.4	-64.7		
133.5	49367.5	-68.3		
129.1	50030.3	-68.5		
116.7	52017.2	-70.5		
112.9	52665.4	-70.5		
108.7	53109.1	-69.8		
100.0	55044.1	-70.9		
95.3	55983.3	-71.7		
91.5	56781.6	-68.7		
82.3	58076.1	-68.7		
75.3	60662.2	-62.0		
70.0	62160.0	-59.9		
55.5	66943.9	-60.3		
50.0	69105.7	-57.9		

STATION ALTITUDE 5912.75 FEET MSL
20 JULY 83 0915 MDT
ASCENSION NO. 42

SIGNIFICANT LEVEL DATA

2100290042

EAST-28/CHILRY

GEODETIC COORDINATES
32.89927 LAT DEG
136.40591 LON DEG

TABLE 10 CON'T

PRESSURE FROM FRICTION	TEMPERATURE	REL.HUM.
ALTITUDE	AIR DEWPOINT	PERCENT
MILLIBARS MSL FEET	DEGREES CENTIGRADE	
470.3	73655.9	-52.5

STATION ALTITUDE 3912.75 FEET MSL
29 JULY 83 0915 MDT
ASCENSION NO. 42

UPPER AIR DATA
210n290042
EAST-28/CHLIRY
TABLE 11

GEODETIC COORDINATES
J2-09927 LAT DEG
136.40591 LONG DEG

GEOMETRIC ALTITUDE MSL MILLIBARS	PRESSURE MILLIBARS	TEMPERATURE AIR DEWPNT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF WIND KNOTS	WIND DATA DEGREES (TN)	INDEX OF REFRACTION
3912.7	1085.0	26.0	9.0	34.0	1022.6	676.4	1.000278
4000.0	1082.5	27.2	7.0	29.4	1018.6	676.7	2.8
4500.0	1067.2	26.1	8.5	32.7	1004.6	675.6	1.000272
5000.0	1052.5	24.7	9.3	39.0	991.4	674.2	2.4
5500.0	1037.6	25.9	9.7	40.6	977.2	673.2	1.000273
6000.0	1022.2	25.1	9.3	41.4	962.8	672.3	1.000269
6500.0	1005.9	22.3	8.0	42.0	948.7	671.4	2.2
7000.0	794.9	21.5	9.1	42.0	934.8	670.5	1.000265
7500.0	781.0	20.7	7.4	42.0	921.2	669.5	1.000261
8000.0	767.4	19.9	6.6	42.0	907.7	668.6	1.000256
8500.0	753.9	18.9	5.9	42.5	895.2	667.3	1.000250
9000.0	744.5	17.7	5.0	43.1	882.9	665.9	1.000245
9500.0	727.5	16.6	4.2	43.7	870.8	664.6	1.000241
10000.0	714.6	15.5	3.4	44.3	853.9	663.3	1.000236
10500.0	702.0	14.4	2.0	44.9	847.1	661.9	1.000231
11000.0	689.4	13.2	1.9	46.3	835.5	660.5	1.000231
11500.0	675.9	11.9	1.2	47.8	824.1	659.0	1.000227
12000.0	664.7	10.7	0.5	49.3	812.0	657.6	1.000223
12500.0	652.7	9.5	-0.2	50.8	801.7	656.1	1.000221
13000.0	640.9	8.2	-0.8	53.1	790.8	654.6	1.000219
13500.0	629.0	6.0	-0.7	58.6	780.0	653.0	1.000215
14000.0	617.4	5.4	-0.9	64.1	769.5	651.3	1.000211
14500.0	605.0	4.0	-1.1	69.6	759.1	649.7	1.000207
15000.0	594.8	2.5	-1.4	75.1	749.0	648.0	1.000204
15500.0	582.7	1.1	-1.8	80.7	738.9	646.3	1.000202
16000.0	572.9	-0.3	-2.3	86.2	729.1	644.6	1.000200
16500.0	562.1	-1.5	-3.1	88.4	718.4	643.2	1.000197
17000.0	551.5	-2.4	-4.0	89.0	707.4	642.0	1.000194
17500.0	541.0	-3.4	-4.9	89.0	696.6	640.8	1.000192
18000.0	530.7	-4.4	-5.7	90.2	685.9	639.0	1.000189
18500.0	520.6	-5.4	-6.6	90.8	675.5	638.4	1.000187
19000.0	510.7	-6.2	-7.1	92.9	664.6	637.4	1.000185
19500.0	500.9	-6.9	-7.5	95.7	653.7	636.5	1.000184
20000.0	491.2	-7.6	-8.3	96.3	643.5	635.4	1.000181
20500.0	481.7	-8.0	-9.2	96.7	633.1	634.2	1.000177
21000.0	472.5	-9.7	-10.1	97.0	623.1	633.1	1.000174
21500.0	463.0	-10.0	-11.4	94.7	613.5	631.7	1.000170
22000.0	454.0	-11.0	-12.0	92.5	604.0	630.4	1.000167
22500.0	445.0	-12.0	-14.1	90.2	594.6	629.0	1.000164
23000.0	436.3	-13.0	-15.0	88.0	585.4	627.7	1.000161

SATION ALTITUDE 3912.75 FEET MSL
29 JULY 83 0915 MDT
ASCENSION ISL. 42

UPPER AIR DATA
2100290042
EAST-28/CHERRY
TABLE 11 CON'T

GEODETIC COORDINATES
32°89927 LAT DEG
136°40591 LON DEG

GEODETIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GRA/CUBIC METER	SPEED KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
23500.0	427.7	-14.6	-18.4	72.4	575.4	626.9	134.7	10.1	1.000136
24000.0	419.2	-14.8	-21.0	47.0	564.8	626.4	145.9	12.9	1.000131
24500.0	410.6	-15.2	-20.6	30.6	554.0	625.0	150.3	15.0	1.000127
25000.0	402.7	-16.0	-27.5	36.2	545.1	625.0	149.1	15.5	1.000125
25500.0	394.6	-16.8	-27.3	39.7	536.0	623.9	148.2	15.4	1.000123
26000.0	386.7	-17.8	-27.5	42.2	527.2	622.7	147.5	14.6	1.000121
26500.0	378.9	-18.8	-29.3	39.0	518.0	621.5	144.6	13.8	1.000119
27000.0	371.2	-19.8	-31.9	33.0	510.3	620.2	139.7	13.1	1.000116
27500.0	363.7	-20.8	-34.8	27.1	502.0	618.9	136.0	13.1	1.000114
28000.0	355.3	-22.0	-36.2	26.0	493.9	617.5	133.0	13.4	1.000112
28500.0	346.9	-23.2	-36.7	27.5	486.1	616.1	133.5	13.6	1.000110
29000.0	341.7	-24.3	-37.2	29.0	478.3	614.6	133.8	13.7	1.000108
29500.0	334.7	-25.5	-37.8	30.5	470.7	613.1	129.1	13.6	1.000106
30000.0	327.8	-26.7	-39.3	32.0	463.2	611.7	124.8	13.6	1.000105
30500.0	320.9	-27.9	-38.0	34.6	455.7	610.2	122.1	13.5	1.000103
31000.0	314.2	-29.0	-39.0	37.3	448.3	608.7	119.9	13.5	1.000101
31500.0	307.6	-30.2	-39.4	39.9	441.0	607.3	119.3	13.5	1.000100
32000.0	301.1	-31.4	-39.9	42.5	433.8	605.8	118.9	13.7	1.000098
32500.0	294.6	-32.7	-41.0	42.6	426.7	604.2	119.8	14.8	1.000096
33000.0	286.3	-33.9	-42.3	42.1	419.7	602.6	120.3	15.7	1.000094
33500.0	282.1	-35.2	-43.6	41.5	412.9	601.0	119.5	15.7	1.000093
34000.0	275.0	-36.5	-44.9	41.0	406.2	599.4	119.0	15.5	1.000091
34500.0	270.0	-37.8	-46.2	40.5	399.6	597.7	119.2	13.8	1.000090
35000.0	264.2	-39.0	-47.6	39.5**	393.1	596.1	119.7	12.1	1.000088
35500.0	258.4	-40.4	-53.2	23.6**	386.7	594.4	122.1	10.9	1.000086
36000.0	252.7	-41.7	-63.1	7.7**	380.4	592.6	125.1	9.7	1.000085
36500.0	247.0	-43.0			374.0	591.0	128.6	10.1	1.000083
37000.0	241.4	-44.3			367.5	589.4	131.8	10.6	1.000082
37500.0	236.0	-45.5			361.1	587.8	133.0	12.1	1.000080
38000.0	230.6	-46.7			354.8	586.2	133.9	13.7	1.000079
38500.0	225.4	-47.9			348.7	584.6	136.1	15.3	1.000078
39000.0	220.3	-49.2			342.6	583.0	138.2	16.7	1.000076
39500.0	215.3	-50.4			336.7	581.5	140.1	17.8	1.000075
40000.0	210.4	-51.4			330.6	580.1	142.2	17.6	1.000074
40500.0	205.6	-52.0			323.8	579.4	144.3	17.5	1.000072
41000.0	200.8	-53.2			318.0	577.8	146.5	16.3	1.000071
41500.0	196.1	-54.0			311.7	576.8	149.0	15.0	1.000069
42000.0	191.5	-54.6			305.3	575.9	151.4	14.5	1.000068
42500.0	187.0	-55.3			299.0	575.0	153.7	14.4	1.000067
43000.0	182.6	-56.2			293.2	573.9	156.4	14.3	1.000065

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3,912.75 FT MSL
29 JULY 83 0915 MDT
ASCENSION NO. 42

UPPER AIR DATA
2100290042
EAST-23/CHERRY
TABLE 11 CON'T

GEOPHYSIC ALTITUDE FT SL FEE	PRESSURE MILLIBARS	TEMPERATURE DEGREES CENTIGRADE	AIR DEWPOINT DEGREES CENTIGRADE	REL.HUM. PERCENT	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DEGREES (T)	WIND DATA KNOTS	INDEX OF REFRACTION
43500.0	175.2	-57.2				287.6	572.4	159.2	14.4	1.000004
44000.0	174.0	-58.3				282.1	571.0	163.1	14.2	1.000003
44500.0	169.8	-59.4				276.8	569.5	167.8	13.8	1.000002
45000.0	165.7	-60.5				271.5	568.1	172.4	13.3	1.000001
45500.0	161.6	-61.6				266.4	566.6	177.1	12.7	1.000059
46000.0	157.9	-62.7				261.4	565.2	182.4	12.7	1.000058
46500.0	154.1	-63.7				256.3	563.8	187.6	13.1	1.000057
47000.0	150.3	-64.6				251.1	562.6	192.1	13.7	1.000056
47500.0	146.6	-65.4				245.0	561.5	195.8	14.5	1.000055
48000.0	142.0	-66.2				240.6	560.5	198.1	15.0	1.000054
48500.0	139.4	-67.0				235.6	559.4	198.1	15.0	1.000052
49000.0	136.0	-67.7				230.6	558.4	197.4	15.0	1.000051
49500.0	132.6	-68.3				225.6	557.5	192.5	15.1	1.000050
50000.0	129.3	-68.5				220.1	557.3	187.6	15.4	1.000049
50500.0	126.1	-69.0				215.1	556.7	181.6	16.9	1.000048
51000.0	122.9	-69.5				210.2	556.0	176.7	18.6	1.000047
51500.0	119.6	-70.0				205.4	555.3	172.0	20.3	1.000046
52000.0	116.8	-70.5				200.8	554.6	168.3	21.8	1.000045
52500.0	113.9	-70.5				195.7	554.6	167.1	21.6	1.000044
53000.0	111.0	-70.2				190.5	555.0	166.1	21.2	1.000042
53500.0	108.2	-69.9				185.4	555.5	167.6	18.4	1.000041
54000.0	105.5	-70.2				181.0	555.0	169.5	15.6	1.000040
54500.0	102.8	-70.5				176.8	554.5	163.8	12.0	1.000039
55000.0	100.2	-70.9				172.6	554.1	153.2	8.5	1.000038
55500.0	97.7	-71.3				166.6	553.5	126.5	8.8	1.000038
56000.0	95.2	-71.6				164.0	553.0	105.6	10.9	1.000037
56500.0	92.8	-69.8				159.0	555.6	95.7	13.9	1.000035
57000.0	90.5	-68.7				154.2	557.0	89.7	17.3	1.000034
57500.0	88.2	-68.7				150.3	557.0	88.9	19.6	1.000033
58000.0	86.0	-68.7				146.6	557.0	89.2	21.5	1.000033
58500.0	83.9	-68.7				142.9	557.0	95.3	22.3	1.000032
59000.0	81.8	-68.2				139.1	557.7	104.2	23.0	1.000031
59500.0	79.8	-66.4				134.4	560.2	114.1	23.0	1.000030
60000.0	77.8	-64.5				129.9	562.8	125.8	22.8	1.000029
60500.0	75.9	-62.6				125.6	565.3	133.8	21.8	1.000028
61000.0	74.1	-61.5				121.9	566.7	136.7	18.0	1.000027
61500.0	72.3	-60.8				118.6	567.7	138.5	14.6	1.000026
62000.0	70.5	-60.1				115.4	568.6	130.1	12.3	1.000026
62500.0	68.9	-59.9				112.5	568.9	118.4	10.4	1.000025
63000.0	67.2	-60.0				109.8	568.8	110.8	11.2	1.000024

STATION ALTITUDE 3,112.75 FEET MSL
 29 JULY 83 0915 MDT
 ASCENSION NO. 42

UPPER AIR DATA
 2100290042
 EAST-26/CHERRY

TABLE 11 CON'T

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEWPOINT DEGREES	REL. HUM. PERCENT	DENSITY GM/CURIC METER	WIND DATA DIRECTION DEGREES (TN) KNOTS	WIND DATA SPEED KNOTS	REFLEX OR REFRACTION
61,000.0	62.0	-60.0		107.4	568.8	100.0	1.000024
64000.0	64.0	-60.1		104.7	568.7	96.1	13.5
65000.0	62.5	-60.1		102.2	568.6	89.3	15.1
66000.0	61.0	-60.1		99.7	568.6	89.1	17.3
65500.0	59.5	-60.2		97.4	568.5	91.2	19.9
66000.0	58.1	-60.2		95.1	568.5	92.6	21.4
66500.0	56.7	-60.3		92.8	568.4	93.6	21.8
67000.0	55.4	-60.2		90.6	568.5	94.1	22.0
67500.0	54.0	-59.7		88.2	569.2	92.7	21.6
68000.0	52.7	-59.1		85.8	569.9	91.2	21.2
68500.0	51.5	-58.6		83.6	570.7	90.5	21.8
69000.0	50.3	-58.0		81.4	571.4	89.8	22.5
69500.0	49.1	-57.4		79.3	572.2	90.7	23.4
70000.0	47.9	-56.9		77.2	573.0	92.2	24.4
70500.0	46.8	-56.2		75.2	573.8	93.6	25.6
71000.0	45.7	-55.7		73.2	574.5	94.8	27.1
71500.0	44.6	-55.1		71.3	575.3	95.8	28.7
72000.0	43.6	-54.5		69.4	576.1		1.000015
72500.0	42.6	-53.9		67.6	576.9		1.000015
73000.0	41.6	-53.3		65.9	577.7		1.000015
73500.0	40.6	-52.7		64.2	578.4		1.000014

STATION ALTITUDE 9412.75 F.L.T. MSL
29 JULY 85 0915 MDT
ASCENSION ISL. 42

MANUFACTORY LEVELS
2100290042
LASI-28/11/11

GEODUTIC COORDINATES
32.89927 LAT DEG
136.40591 LON DEG

TABLE 12

PRESSURE (EQUATORIAL MILLIBARS	FLEET	TEMPERATURE OF AIR DEGREES C	TEMPERATURE OF DEWPOINT DEGREES C	WIND DIRECTION DEGREES (IN)	WIND SPEED KNOTS
850.0	5076.	24.5	10.0	40.	17.5
800.0	6812.	21.8	8.4	42.	93.0
750.0	8661.	16.5	5.6	43.	125.6
700.0	10569.	14.2	2.5	45.	98.4
650.0	12605.	9.2	-4.	51.	97.8
600.0	14761.	3.2	-1.3	73.	105.4
550.0	17053.	-2.6	-4.1	89.	110.9
500.0	19517.	-7.0	-7.5	96.	82.0
450.0	22192.	-12.3	-13.4	91.	98.3
400.0	25123.	-16.2	-27.2	38.	148.6
350.0	28380.	-23.0	-36.6	27.	133.4
300.0	32022.	-31.6	-40.0	43.	119.1
250.0	36161.	-42.4			126.7
200.0	40935.	-53.4			146.4
175.0	43779.	-58.1			162.0
150.0	46914.	-64.7			192.3
125.0	50572.	-69.1			180.1
100.0	54874.	-70.9			152.7
80.0	59243.	-66.6			112.1
70.0	61967.	-59.9			127.4
60.0	65104.	-60.2			90.5
50.0	68846.	-57.9			89.7

AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4050.00 FEET MSL
29 JULY 1945 MDT
ASCENSION 140. 154

SIGNIFICANT LEVEL DATA
2100030104
JALLEN

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE DEGREES CENTIGRADE	REL. HUM. PERCENT
880.3	4051.0	31.8	31.0
869.4	4416.6	28.5	32.0
850.0	5072.7	26.5	34.0
775.1	7717.2	20.1	46.0
752.0	8573.4	18.8	46.0
730.0	10581.0	14.6	43.0
626.3	13628.9	6.3	59.0
607.6	14944.3	4.3	71.1
583.6	15519.4	1.6	81.0
535.3	17790.1	-3.8	96.0
504.5	19324.8	-6.3	96.0
500.0	19555.0	-7.8	97.0
484.5	20360.3	-8.8	89.0
467.4	21275.3	-9.8	68.0
446.4	22438.1	-12.2	70.0
433.2	23191.4	-13.9	81.0
423.1	23781.0	-14.3	64.0
411.6	24467.6	-15.3	29.0
400.0	25176.7	-16.5	36.0
382.8	26262.0	-17.7	41.0
360.1	27757.0	-21.4	-35.3
334.1	29561.1	-25.6	-39.7
327.1	30064.8	-27.4	-35.0
316.3	30358.5	-28.7	-39.8
300.0	32090.3	-31.5	-39.9
276.4	33954.1	-36.9	-44.8
263.5	35071.1	-39.1	-46.9
250.0	36249.8	-42.6	-43.0
230.4	37710.8	-45.9	-43.0
200.0	41100.5	-53.4	-43.0
150.0	47040.2	-65.2	-43.0
116.8	51660.5	-70.7	-43.0
107.6	53607.9	-70.2	-43.0
100.0	55033.0	-71.8	-43.0
91.4	56000.5	-67.8	-43.0
77.0	60230.0	-64.8	-43.0
70.0	62100.3	-59.4	-43.0
64.8	63770.2	-61.0	-43.0
56.0	69131.3	-57.9	-43.0
45.4	71158.8	-54.3	-43.0

STATION ALTITUDE 4,151.00 FEET MSL
29 JULY 03 1045 MDT
ASCLISTED NO. 104

SIGNIFICANT LEVEL DATA

2100030104
JALLEN

GEODDATIC COORDINATES
33°16'712 LAT DEG
106°49'511 LONG DEG

TABLE 13 CON'T

PRESSURE GEOMETRIC MILLIBARS	GEOMETRIC ALTITUDE FEET MSL	TEMPERATURE AIR DEPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT
35.7	76281.0	-51.8	

SATION ALTITUDE 4951.00 FEET MSL
29 JULY 83 1045 MDT

UPPER AIR DATA
2100030104
JALFII

TABLE 14

GEOMETRIC ALTITUDE FEET	PRESSURE MILLIBARS	TEMPERATURE DEGREES CENTIGRADE	AIR DEWPOINT PERCENT	REL.HUM. PERCENT	DENSITY GM/CM ³	SP. WT. OF WATER KNOTS	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
4051.0	980.2	31.0	12.0	31.0	999.3	682.3	40.0	1.000202
4500.0	860.9	28.2	10.1	32.3	996.0	678.2	44.4	1.000274
5000.0	852.1	26.7	9.5	33.8	984.7	676.4	48.7	1.000269
5500.0	837.4	25.5	9.3	35.9	971.8	675.0	52.3	1.000266
6000.0	822.9	24.3	9.1	38.2	958.8	673.6	55.5	1.000263
6500.0	806.7	23.0	8.9	40.5	946.1	672.3	62.3	1.000260
7000.0	794.7	21.8	8.6	42.7	933.5	670.9	76.6	1.000257
7500.0	781.6	20.6	8.3	45.0	921.2	669.5	92.6	1.000253
8000.0	767.4	19.7	7.7	46.0	908.4	668.4	104.9	1.000249
8500.0	754.0	18.9	7.0	46.0	894.6	667.5	115.9	8.6
9000.0	740.6	17.9	5.9	45.4	882.2	666.2	114.7	9.6
9500.0	727.5	16.9	4.7	44.6	870.0	664.9	113.2	1.000238
10000.0	714.7	15.8	3.6	43.9	858.0	663.6	107.8	1.000233
10500.0	702.0	14.8	2.4	43.1	846.1	662.3	105.6	1.000227
11000.0	689.4	13.5	1.8	45.2	834.7	660.8	102.2	15.5
11500.0	676.1	12.1	1.4	47.8	823.6	659.2	101.5	1.000215
12000.0	664.7	10.7	0.9	50.4	812.6	657.6	103.6	17.3
12500.0	652.6	9.4	0.3	53.1	801.4	656.0	106.0	17.5
13000.0	640.8	8.0	-0.3	55.7	791.2	654.4	110.6	1.000205
13500.0	629.3	6.7	-0.9	58.3	780.6	652.8	115.3	16.7
14000.0	617.7	5.4	-1.1	63.1	769.9	651.3	117.9	1.000199
14500.0	606.3	4.2	-1.1	68.7	759.0	649.9	119.5	16.7
15000.0	595.1	2.9	-1.1	74.7	748.3	648.4	118.3	1.000197
15500.0	584.0	1.6	-1.3	80.8	737.7	647.0	116.7	1.000192
16000.0	573.0	0.5	-1.9	84.2	727.0	645.5	114.2	14.7
16500.0	562.2	-0.7	-2.5	87.5	716.5	644.1	109.6	1.000166
17000.0	551.6	-1.9	-3.2	90.8	706.2	642.7	102.3	13.5
17500.0	541.2	-3.1	-3.9	94.1	696.0	641.2	95.7	1.000179
18000.0	531.0	-4.1	-4.7	96.0	685.5	640.0	90.3	1.000175
18500.0	520.8	-5.0	-5.5	96.0	674.5	638.9	85.6	13.9
19000.0	510.9	-5.8	-6.3	96.0	663.7	637.9	80.9	13.4
19500.0	501.1	-7.4	-7.9	96.8	655.3	635.8	78.3	12.2
20000.0	491.4	-8.4	-9.5	92.6	644.9	634.7	76.5	10.6
20500.0	481.8	-9.0	-10.9	85.8	634.0	633.9	79.2	9.3
21000.0	472.5	-9.5	-11.2	74.3	623.4	633.1	65.4	1.000151
21500.0	462.3	-10.3	-11.9	68.4	612.9	632.1	80.8	7.4
22000.0	454.2	-11.3	-15.8	69.2	603.4	630.9	90.8	6.7
22500.0	445.3	-12.3	-16.5	70.9	595.9	629.6	107.1	5.8
23000.0	436.5	-13.5	-16.4	78.2	584.7	620.3	132.5	5.9
23500.0	427.9	-14.1	-18.0	72.1	574.7	627.4	156.7	7.6

UPPER AIR DATA
1,000111 COORDINATES
53.16112 LAT DEG
106.49511 LONG DEG

STATION ALTITUDE 4151.00 FEET MSL
29 JULY 1953 1045 MDT
ASCENSION NO. 130

UPPER AIR DATA
2100030104
JALLEN
TABLE 14 CON'T

GEODETIC COORDINATES
33.16712 LAT DEG
106.49511 LON DEG

GEODETIC ALTITUDE METERS	PRESSURE MILLIBARS	TEMP. & HUMID. AIR DEWPOINT DEGREES CENTIGRADE	REL. HUMI. PERCENT	DENSITY GM/CUBIC METER	SPD. OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TRUE)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
24000.0	412.4	-14.0	-22.1	52.8	564.6	026.7	171.0	10.5
24500.0	411.1	-15.4	-21.2	29.3	555.2	625.7	170.5	12.2
25000.0	402.9	-16.2	-23.5	34.3	545.9	624.7	164.7	11.000125
25500.0	394.8	-16.9	-27.9	37.5	536.3	623.9	150.8	11.000123
26000.0	386.9	-17.4	-27.8	39.8	526.7	623.2	145.5	12.1
26500.0	379.1	-18.3	-28.8	38.8	517.9	622.1	137.3	11.000119
27000.0	371.4	-19.5	-31.3	34.1	509.9	620.6	135.2	12.2
27500.0	363.9	-20.8	-33.9	29.4	502.1	619.0	134.0	12.6
28000.0	356.5	-22.0	-35.9	26.7	494.3	617.5	135.4	13.4
28500.0	349.2	-23.1	-37.1	26.2	486.4	616.1	135.9	14.2
29000.0	342.0	-24.5	-38.4	25.6	478.6	614.6	132.8	15.0
29500.0	334.9	-25.5	-37.0	25.1	471.0	613.2	129.6	15.7
30000.0	328.0	-27.2	-35.4	45.0	464.4	611.1	124.9	16.6
30500.0	321.1	-28.1	-37.5	39.8	456.4	609.9	122.1	17.4
31000.0	314.4	-29.0	-39.8	34.1	448.5	608.8	122.9	16.3
31500.0	307.8	-30.1	-39.8	38.2	441.1	607.4	123.6	16.8
32000.0	301.3	-31.3	-39.8	42.2	433.8	606.0	124.4	16.6
32500.0	294.6	-32.7	-40.9	43.0	427.0	604.2	124.4	16.1
33000.0	288.5	-34.1	-42.5	43.0	420.4	602.4	123.1	17.0
33500.0	282.3	-35.6	-43.6	43.0	413.9	600.5	122.0	16.5
34000.0	276.2	-37.0	-44.9	43.0	407.4	598.7	121.7	16.9
34500.0	270.2	-38.0	-45.8	43.0	400.2	597.5	121.3	17.5
35000.0	264.5	-39.0	-46.7	43.0	393.1	596.2	120.9	18.2
35500.0	258.5	-40.4	-51.9	27.4**	386.8	594.4	121.6	16.7
36000.0	252.8	-41.9	-61.9	9.1**	380.8	592.5	124.2	19.0
36500.0	247.2	-42.9			374.1	591.1	127.5	19.4
37000.0	241.7	-43.6			366.8	590.2	131.9	20.1
37500.0	236.2	-44.6			360.1	589.0	135.9	20.7
38000.0	230.8	-45.6			353.7	587.4	139.5	21.2
38500.0	225.6	-47.0			347.5	585.8	142.3	21.1
39000.0	220.4	-48.3			341.4	584.2	144.6	20.2
39500.0	215.4	-49.5			335.5	582.6	146.0	19.8
40000.0	210.5	-50.7			329.6	581.0	146.1	19.9
40500.0	205.7	-51.9			323.9	579.5	147.5	19.7
41000.0	201.0	-53.1			318.2	577.9	150.2	19.2
41500.0	196.2	-54.2			312.2	576.5	153.2	18.5
42000.0	191.5	-55.2			306.1	575.2	156.1	17.5
42500.0	186.9	-56.2			300.1	573.9	158.9	16.8
43000.0	182.3	-57.2			294.3	572.5	161.2	16.8
43500.0	178.1	-58.2			288.6	571.2	164.7	16.7

** AT LAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 1051.00 FT MSL
27 JULY 1955 1045 MDT
ASCN. N. NO. 104

UPPER AIR DATA
210030104
JALIFN

TABLE 14 CON'T

GROUND-LEVEL ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE DEGREES, CENTIGRADE	AIR DEPOINT DEGREES	REL. HUM. PERCENT	DENSITY METER	GRAD/SEC	SOUND KNOTS	DIRECTION DEGREES (IN)	WIND DATA KNOTS	SPEED OF REFRACTION	INDEX
44000.0	175.8	-59.1			283.0	569.9	170.0	16.8	1.000003		
44500.0	169.7	-60.1			277.5	568.6	175.0	17.2	1.000002		
45000.0	165.6	-61.1			272.1	567.3	171.4	18.0	1.0000061		
45500.0	161.7	-62.1			266.9	565.9	173.1	17.7	1.0000059		
46000.0	157.8	-63.1			261.7	564.6	188.1	14.7	1.0000058		
46500.0	154.0	-64.1			256.7	563.3	207.6	13.1	1.0000057		
47000.0	150.3	-65.1			251.7	561.9	221.5	13.1	1.0000056		
47500.0	146.6	-65.7			246.2	561.1	234.6	13.9	1.0000055		
48000.0	143.0	-66.3			240.8	560.3	212.6	13.4	1.0000054		
48500.0	139.4	-66.9			235.5	559.5	191.1	14.9	1.0000053		
49000.0	135.9	-67.5			230.3	558.6	185.6	16.4	1.0000051		
49500.0	132.5	-68.1			225.2	557.8	178.3	17.8	1.0000050		
50000.0	129.2	-68.7			220.2	557.0	173.2	19.9	1.0000049		
50500.0	126.0	-69.3			215.4	556.2	169.0	22.3	1.0000048		
51000.0	122.9	-69.9			210.6	555.4	165.9	24.5	1.0000047		
51500.0	119.8	-70.5			206.0	554.6	163.7	26.4	1.0000046		
52000.0	116.6	-70.6			200.9	554.4	164.2	25.9	1.0000045		
52500.0	113.9	-70.5			195.7	554.6	171.2	21.0	1.0000044		
53000.0	111.0	-70.4			190.7	554.8	181.2	16.7	1.0000042		
53500.0	108.2	-70.2			185.7	555.0	181.9	12.6	1.0000041		
54000.0	105.5	-70.6			181.4	554.4	163.2	8.5	1.0000040		
54500.0	102.8	-71.2			177.3	553.6	156.0	6.5	1.0000039		
55000.0	100.2	-71.8			173.3	552.9	120.0	7.5	1.0000039		
55500.0	97.7	-70.8			168.1	554.2	99.5	10.0	1.0000037		
56000.0	95.2	-69.6			163.0	555.8	88.3	12.7	1.0000036		
56500.0	92.8	-68.5			158.0	557.3	87.0	16.4	1.0000035		
57000.0	90.5	-67.6			153.4	558.5	96.3	22.3	1.0000034		
57500.0	88.3	-67.2			149.3	559.1	101.7	28.5	1.0000033		
58000.0	86.1	-66.8			145.3	559.7	110.9	30.5	1.0000032		
58500.0	84.0	-66.3			141.4	560.3	118.9	33.1	1.0000032		
59000.0	81.9	-65.9			137.7	560.9	123.4	30.8	1.0000031		
59500.0	79.9	-65.4			134.0	561.5	127.5	26.1	1.0000030		
60000.0	77.9	-65.0			130.4	562.1	130.1	21.2	1.0000029		
60500.0	75.0	-64.1			126.6	563.3	123.0	15.9	1.0000028		
61000.0	74.2	-62.7			122.8	565.2	109.1	10.9	1.0000027		
61500.0	72.4	-61.3			119.0	567.1	100.6	10.9	1.0000026		
62000.0	70.6	-59.9			115.4	568.9	94.8	11.7	1.0000026		
62500.0	69.9	-59.7			112.5	569.1	93.5	13.6	1.0000025		
63000.0	68.3	-60.2			110.1	568.5	90.3	17.2	1.0000025		
63500.0	66.7	-60.7			107.7	567.8	90.1	20.7	1.0000024		

SATION ALTITUDE 451.00 FT MSL
29 JULY 83 1045 MD^f
ASCENSION NO. 104

UPPER AIR DATA
2100030104
JALLEN

TABLE 14 CON'T

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEPOINT DEGREES	REL. HUM. PERCENT	REL. HUM. CENTIGRADE	SHFT'D OF GM/CMIC METER	DENSITY KNOIS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
64000.0	64.1	-60.9			105.2	567.6	97.2	21.6	1.000023
64500.0	62.6	-60.6			102.5	568.0	96.3	22.4	1.000023
65000.0	61.1	-60.3			99.9	568.4	92.4	22.9	1.000022
65500.0	59.6	-60.0			97.4	568.8	85.4	23.4	1.000022
66000.0	58.2	-59.7			95.0	569.2	78.9	24.2	1.000021
66500.0	56.8	-59.4			92.6	569.5	61.2	24.4	1.000021
67000.0	55.4	-59.1			90.2	569.9	83.6	24.6	1.000020
67500.0	54.1	-58.8			87.9	570.3	91.0	24.9	1.000020
68000.0	52.8	-58.6			85.7	570.7	102.0	26.2	1.000019
68500.0	51.6	-58.3			83.6	571.1	111.3	26.5	1.000019
69000.0	50.3	-58.0			81.5	571.5	108.5	28.5	1.000018
69500.0	49.0	-57.2			79.3	572.4	105.8	28.7	1.000018
70000.0	48.0	-56.4			77.1	573.6	100.9	29.4	1.000017
70500.0	46.9	-55.5			75.0	574.8	94.2	31.0	1.000017
71000.0	45.7	-54.6			72.9	576.0	88.2	33.0	1.000016
71500.0	44.7	-54.1			71.1	576.5	87.1	34.8	1.000016
72000.0	43.6	-53.9			69.3	576.9	86.5	36.6	1.000015
72500.0	42.6	-53.6			67.7	577.2	87.2	38.1	1.000015
73000.0	41.6	-53.4			66.0	577.5	90.5	39.3	1.000015
73500.0	40.7	-53.2			64.4	577.8	93.6	40.6	1.000014
74000.0	39.7	-52.9			62.8	578.1			1.000014
74500.0	38.8	-52.7			61.3	578.5			1.000014
75000.0	37.9	-52.4			59.8	578.8			1.000013
75500.0	37.0	-52.2			58.4	579.1			1.000013
76000.0	36.2	-51.9			57.0	579.4			1.000013

STATION ALTITUDE 4050 FEET MSL
29 JULY 83 1045 MDT
ASCENSION NO. 104

MANDATORY LEVELS
2101030104
JALLIN

GEODETIC COORDINATES
33°16'71.2 LAT DEG
106°49'51.1 LON DEG

TABLE 15

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE			REL.HUM. PERCENT	WIND DATA DIRECTION DEGREES (IN) SPEED KNOTS
		AIR DEGREES	DEGREES CENTIGRAU	DEGREES CENTIGRAU		
850.0	5069.	26.5	9.4	34.	49.2	6.1
800.0	6812.	22.3	6.7	42.	71.0	6.5
750.0	8041.	18.6	6.0	46.	116.0	6.9
700.0	10571.	14.6	2.2	43.	103.4	14.2
650.0	12603.	9.1	0.2	54.	107.1	17.4
600.0	14764.	3.5	-1.1	72.	118.9	16.4
550.0	17062.	-2.1	-3.3	91.	101.1	15.4
500.0	19528.	-7.8	-8.2	97.	78.2	12.1
450.0	22202.	-11.8	-16.2	70.	94.4	6.3
400.0	25136.	-16.5	-20.0	36.	162.9	15.3
350.0	28374.	-23.0	-37.0	26.	136.5	14.1
300.0	32036.	-31.5	-39.0	43.	124.5	18.6
250.0	36171.	-42.6			129.5	19.1
200.0	41008.	-53.4			150.9	19.1
175.0	43793.	-58.9			164.7	16.8
150.0	46920.	-65.2			222.2	15.2
125.0	50526.	-69.5			167.9	23.1
100.0	54870.	-71.0			119.1	7.6
80.0	59271.	-65.5			126.9	26.6
70.0	61969.	-59.4			93.2	11.9
60.0	65121.	-60.1			87.8	23.2
50.0	68873.	-57.9			108.0	28.5
40.0	73557.	-53.0				

** ALL LAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

END

FILMED

0-88

EDITING